/25 cont./

*795 refrigerator, radio, power plant, powerful American cars, etc
793 .... Certain ones even own real estate in Dakar which they rent for a good price, increasing their revenues by that much more.

If this standard of living is the result of the attachment and the fanatical work of the talibés, reciprocally this luxury increases their prestige in the eyes of these same talibés. These simple people see in this exterior wealth a sign of the greatness, power, and glory of their marabout. They are proud to see him rich and influential, as if they themselves participated in this wealth and influence.

Still another anecdote will underline, it seems, this blind admiration of the faithful for their religious leaders in spite of (and perhaps because of) the exterior signs of their wealth.

The domestic servant of a European official had accompanied his employer to Touba, to the home of Failou M'Backé. Thus he could enter the carré of "his" marabout (for he was a Murid). Upon returning, he said to his employer in a tone of sincere admiration and without a critical afterthought: "My
[352] marabout is a great marabout; his carré has many bedrooms and in each bedroom there is a good bed." When one knows
[513] that the majority of the Blacks usually sleep on wretched pallets or even on mats, and that to possess a good bed is one of the first objectives of the African who advances, one will appreciate the full value of this remark...

793 After that no one will be surprised that some people have
*795 labeled as "servitude" the situation which the Murid marabouts
●244 reserve for the talibés who work on their plantations. They are,
555 in fact, grouped in teams of ten to 20, and each team has a piece of land to cultivate. Of course the teams compete zealously to bring to the marabout the handsomest harvest. The zeal of the teams is all the greater because each member can hope, if the marabout notices his own zeal, to be initiated at the end of several years to the Murid dikr and to have in his turn a Murid village to superintend. He can even hope to have assigned to him a new area to be attached to the brotherhood

/25 cont./

793 and to receive the title of Cheikh, with the advantages which
*795 that confers. While waiting, he works at hoeing and clearing
244 land without counting or measuring all the lands capable of pro-
[555] ducing the groundnuts which make up the fortune of his mara-
bout.

It is this way of colonizing the lands, and more particularly the new lands, which has made the brotherhood play an important role in the economy of Senegal in recent years. The Murid marabouts have been and remain clearers /26/ of land and large-
[433] scale producers of groundnuts. It can be estimated that they alone produce a little more than half of the total harvest of the Territory.

793 This brilliant picture is nevertheless not without shadows.
*795 Even though the influence of the Murid leaders is not dangerous
578 on the political level as a consequence of the good understanding which exists between them and the Administration, even though there is no reason to fear that they may incite the members of the brotherhood to insubordination, their presence in the villages does pose problems. There are problems when they have settled in villages whose chiefs are not Murids (if not, sometimes, anti-Murid). In these cases it often happens that there are collisions
[627] between the customary chiefs and the Murid marabouts, principally since the reforms of 1945 which diminished considerably the powers of the chiefs and their prestige in the eyes of the people at a time when the influence and glory of the marabouts were increasing. Many times the Murids of a canton want to obey
[632] only their religious leader and willfully ignore the canton chief. In addition, in the face of the invading agricultural activity of the Murids, the non-Murid populations stiffen themselves more and more and try to resist their agrarian encroachments. That sometimes creates quarrels; indeed it even provokes violent disorders which have to be arbitrated or stopped.

793 On the other hand, the recent political evolution which is
*795 resulting in giving the right to vote to all Senegalese men and
666 all Senegalese women has prompted the politicians to seek the collaboration and friendship of the Murid leaders... so that they

/27 cont./

*795 These political rivalries which are being outlined are in part caused by the social consequences of Muridism.

It has often been reproached (in the Senegalese world) for turning the young people, not only against traditional cults and brotherhoods, but also against their families and, in a general way, against their customary framework. As a matter of fact, all of the talibés who work on behalf of the Murid marabouts are young men who have, properly speaking, deserted their villages and their families in order to be Murids and only Murids. If they later return to their natal villages, it is to act as a kind of militant, missionaries, who wish absolutely to convert these villages to the Murid faith.

If one adds to this that the way in which the talibés are treated and trained is not very educative, if one notes that the organization of the work of the plantations and of its productivity is effectively very close to pure and simple exploitation of the Murid workers, one will admit that the social organization of Muridism is not exempt from all criticism.

*795 ● 249 241 One might think that, even if Murid fanaticism has drawbacks from the social point of view, it gives, at least on the economic level, some remarkable results. It has given a taste for agricultural work to a large part of the Senegalese population, and it has opened great areas, previously uncultivated, for the cultivation of the groundnut. Unfortunately, a more thorough study of /28/ this question makes us fear that the way in which the Murids exploit their groundnut planting nowadays may be a danger for the economic future of the country.

An important report of an agricultural mission devoted to this problem an entire chapter which shows all the drawbacks of this extensive and destructive single-crop cultivation aimed solely toward an immediate material profit, and which it does not hesitate to call "pillage economy." Indeed, in his desire to harvest groundnuts for the profit of his marabout, the talibé, who is not a peasant, spoils the land. He clears land without any consideration at all; he destroys the trees and especially the caddes, so precious for the land of Senegal. He exhausts

/28 cont./

* 795 • 244 241 the soil, since he practices neither rotation nor fallowing, since he does not utilize either animal fertilizers (he is not at all a stock-breeder), chemical fertilizers, or green fertilizer... and each time that he abandons lands which he has completely (and for a long time to come) exhausted, in order to bring new lands into this devastating cycle, the desert advances behind him. All this is all the more serious because the cultivation undertaken by the Murid talibés has a yield 30 per cent lower than that of the cultivation done by the Black true peasants, and notably the Sérère /Serer/ peasants.

In short, this report regards the Murid as "a ravager of forests and land, and a squanderer of the riches of the territory."

* 795 The author of the report does not stop, however, at these violent criticisms and pessimistic conclusions. According to him (and he is right), the Murid fact does exist and will exist for a long time to come, even if the brotherhood were to split up for reasons of personal and internal rivalries. The different fragments would retain the same spirit and the same methods; one would not see the end of Muridism, but its continuation in different and rival sects.

So he proposes channeling the Murid fanaticism, reforming it, and improving its methods of work and production by acting upon the great Murid leaders themselves and by making them understand the necessity of these reforms and improvements. He adds that Falilou M'Backé is an "intelligent man" who willingly recognizes that many improvements could be made in the present agricultural technique of the Murids and who even thinks that this modernization could only strengthen the vitality of the brotherhood.

Besides, there is every reason to believe that the other leaders of Muridism and most of the "Great Marabouts" will follow the example of the Caliph-general and will understand very quickly (if it can be demonstrated to them) the necessity of avoiding thoughtless clearing /29/ and of replanting caddes where they have been cut down, of using green and chemical fertilizers, indeed of taking an interest in stock-raising and

/414 cont./
*511 procedure, certainly less valuable for a nutritionist, offers
*262 another advantage for us: the costs for vegetables noted during the investigation are among the most precise, whereas the quantities, merely estimated, were sometimes very fantastic. The operation was thus worth the trouble of doing it.

The portion of the income devoted to vegetables is relatively not very important; it exceeded 10% in only one case (No. 16). It is sometimes less than that devoted to condiments. On the other hand, we prove that it does not decrease very noticeably as one approaches the high incomes. The consumption of vegetables seems to vary precisely as the incomes do, increasing with them in almost parallel fashion.

This is the first product that we have encountered where this parallelism begins to be revealed.

The average consumption of vegetables for the 43 families is seven kilograms per man per month. With two exceptions, Nos. 11 and 16, one begins to find it frequently beginning with No. 20, whose income is 12,000 francs. From No. 24 on, most of the consumption is higher than 10 kilograms.

Pushing the investigation further, one sees that No. 11, which is an exception among the small incomes, is a unit of consumption composed of only six persons (4.5 men). Family No. 16, 22 kilograms of vegetables, contains four persons (3.2 men). And then:

No. 21: 16.2 kilograms, 5 persons (3.8)
No. 26: 30.0 kilograms, 3 persons (2.8)
No. 30: 14.0 kilograms, 7 persons (5.1)
No. 34: 11.0 kiloyrams, 4 persons (3.3)
No. 35: 26.0 kilograms, 6 persons (4.6)
No. 43: 19.7 kilograms, 5 persons (4)

• [244] /415/ Nos. 31, 36, and 38 remain. No. 31 has large gardens and does not buy vegetables. Its greater consumption is thus explicable (1).

1. Moreover, for this family this is only an estimation; we

/37/

During the dry season the ground appears bare, but with the first rains it is covered with a lusty vegetation, and it is principally the Gramineae that thus again adorns with verdure this land previously so desolate. S 137

I. -- Gramineae: Food Crops

The petit mil /small millet/, mil chandelle or penicillaire /candle or penicillate millet/ (Pennisetum), is native to Africa. It is also cultivated in India; undoubtedly it was at the time of the slave trade that it was introduced into America. This is the early small millet, or souna of the Wolof. The souna must be sown at the time of the first rains. It shoots up promptly; it grows well in the light, sandy soils (groundnut soils). After the 15th of August it begins to ripen, and one can already eat the unripe ears roasted. When it begins to push out of the ground, the Senegalese, and especially the Sérère /Serer/, sow beans between the rows; this is the volet (Phaseolus vulgaris), which will be eaten as green beans from the 15th of August on. The souna root is regarded by the Africans as a poison and, according to them, might be one of the causes of sleeping sickness. S 243 W [243] S [252] S [241] S [753]

Another variety of small millet is the sanio of the Wolof, late millet or bearded millet (Penicillaria spicata). This is a late variety of small millet with the ears covered with very strong beards, which, entering the eyes of birds, prevents them from eating it. It is said that it gives sottiete (eye ailments). The sanio grows in heavy soils. It is sown during the rainy season and harvested at the end of it, at the same time as groundnuts. W [243] S [753]

The gros mil /great millet/, or basi of the Wolof, requires a heavy and clayey soil. It ripens much later than the souna and can be cultivated in the middle of the rainy season. Sometimes it can even be planted again toward the end of the winter season when one sees that the first sowings have failed. The great millet, or basi, is sorghum (Sorghum sudanense). W [243]

Millet reduced to flour and granulated is called "couscous." S 262

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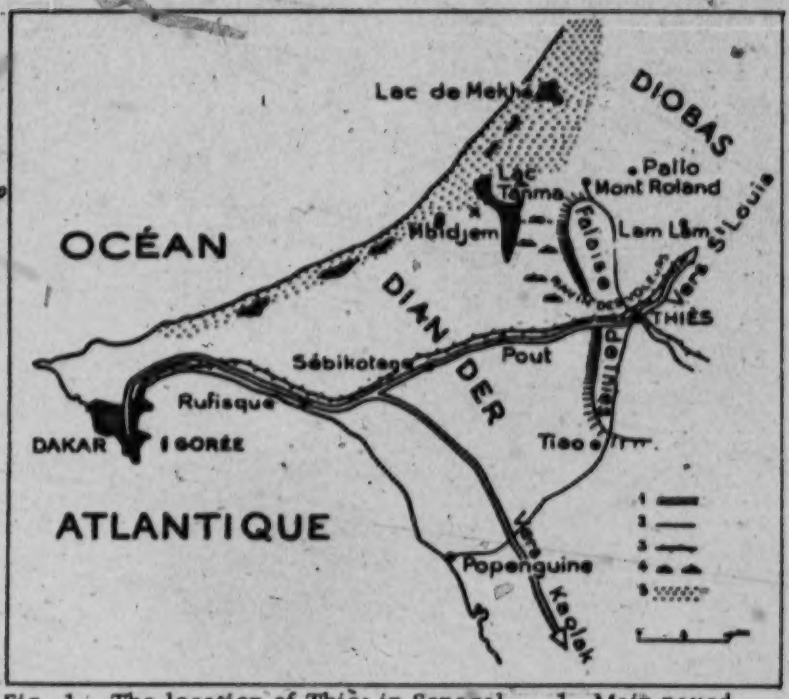

Fig. 1. The location of Thiès in Senegal. 1. Main paved road; 2. secondary road; 3. railroad; 4. swamps; 5. sand.

175 369 361 Verde Peninsula. As long ago as this epoch Thiès seems to have been a strategic point and support point of primary importance.

As early as 1880 the provinces of Diander and Diobas were pacified. The military posts lost their importance and were abandoned one after the other, for example, Nguiguis (near Tivaouane) and Mbidjem. Only the one at Thiès, because of its exceptional location, survived and developed.

175 369 499 244 2. The commercial escale (1880-1923).

The years of the decade 1880-1890 correspond to the period of the development of groundnut cultivation in Senegal and to the construction of the Dakar--Saint-Louis railroad.

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433 Since the "campaign" of 1959-60, the commercial production of groundnuts in Senegal has reached 720,000 metric tons of groundnuts in the shell. In 1957-58, there was a record year with 830,000 metric tons. Since for these recent years the total production of food products can be estimated at about 550,000 metric tons, the proportion of 1,800 kilograms of groundnuts harvested per metric ton of food products, advanced in 1951 by M. Portères, is very close to the Senegalese economic reality (1).

[113]

1. For this information we have consulted: Barbier, J., "L'économie de l'arachide au Sénégal, Contribution à l'Étude du marché français des huiles alimentaires /The economy of the groundnut in Senegal, Contribution to the study of the French marketing of food oils/," typewritten thesis for the doctorate in law, Lille, 20 May 1960, 475 pp.

A.O.F. 57: Tableaux économiques /French West Africa 57: Economic Tables/. Haut-Commissariat de la République en A.O.F. Direction des Services économiques et du plan, 412 pp.

Outre-Mer 58: Service statistique d'Outre-Mer /Oversea 58: Oversea Statistical Service/, P.U.F. 1960.

177
244 The groundnut is originally from America; Jean de Léry, a French clergyman, described this plant around 1855, under the name of "manoki," as a crop of the region of Rio. In the seventeenth century Père Plumier noted it for the Antilles. The Portuguese slave-dealers seem to have imported it to Africa around the middle of the sixteenth century. The natives of Senegambia were soon cultivating it around their huts, and as

/5 cont./

177 244 early as 1560 Alvarez de Almada speaks of the abundant harvests of mantiga eaten fresh by the Mandingue /Mandingo/. In 1840 a Paris chemist, Rousseau, discovered the wealth of oil in the groundnut. In 1841 the brig "Zénith" transported 70 metric tons of nuts to Rouen. Protêt and Faidherbe encouraged this crop, which, in the framework of the colonial economic system, progressed rapidly from the coast toward the interior, thanks to the possibilities of the natural environment.

132 From the Senegal River in the north to the Casamance in the south, the climate of the country changes by successive transitions from Sahelian characteristics to Sudanese aspects. A long dry season of nine months in the north, shorter in the south, from October or December to May-June, contrasts with a "winter season" of three to five months, depending on the region. The frequency and the importance of the precipitations increase from north to south. They go from 350 millimeters in the region of Louga to 1,200 millimeters in that of Ziguinchor. Whereas the coast is moistened by the humid trade wind, the Ferlo to the east is like a desert. These conditions are nearly /6/ ideal for a 244 plant whose vegetative cycle is short -- about 120 days -- and which germinates easily in a slightly moistened soil, develops under heavy rains, and bears fruit best during the dry days that follow.

134 244 The soil conditions also seem to be wholly favorable. The plant is not very demanding with respect to fertility; essentially it requires a light soil, because the fructification is underground. The silico-argillaceous soils of the center of Senegal (the dek of the Ouoloff /Wolof/) and the sandy soils of the north (the dior of the Ouoloff) suit the groundnut perfectly.

496 244 311 The expansion of the area of cultivation, from the coast and the estuaries toward the interior, has been led by the railroads. The Dakar--Saint-Louis railroad, built in 1885, explains the essential role of Cayor in groundnut production at the beginning of the century, since it was along the Dakar-Niger line, achieved in 1888, that the groundnut front progressed toward the east. Today this front, which in the south has broken into the

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496 edges of the woodlands of Casamance, has reached the Ferlo
244 and the zone of the lateritic cuirasses of the east.
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I. The Types of Groundnut Cultivation in Senegal

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[433] The very symbol of the product of "trade," the groundnut is essentially cultivated by the autochthonous peasants, who devote to it an important part of their activities.

1. The types of autochthonous cultivation. Whatever the place of the groundnut may be in the system of crops, one always finds, within the framework of the very short agricultural cycle of winter, the same techniques for the preparation of the soil, the same kinds of tillage.

Everywhere in Senegal the traditional technical contrivances are primitive and permit only rather crude tillage. The
[419] lopping tool, the rhock, a kind of fork with two prongs, the hilaire, formed by a quite long handle and a flat blade in the shape of an ace of hearts, and the hoe, or daba, constitute the essential equipment.

In the spring, at the end of the dry season, the trees and bushes are topped with the lopping tool to 60 or 70 centimeters from the ground. Only the "Faidherbia," stripped of their leaves in winter, are spared. The branches are burned on the spot; their ashes are the sole fertilizer for the field recovered from the bush. The mutilated and burned trunks, the stumps left in place, give it an unfinished and disorderly appearance. Soon after the first rains, generally in June, one proceeds with the sowing. In the holes /7/ four to five centimeters deep, made with the daba or with the handle of the rhock, the cultivator puts one or two groundnut seeds and then, with the heel, covers them with soil. These holes, made in a row, are generally 30 centimeters apart. In July and August, one proceeds with several weedings and dressings with the daba in order to mellow the soil. In September the last cleaning out of foul grasses is done by hand. When the stalks wither, the shells have reached maturity.

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S 244 generally at the end of October or the beginning of November. Harvesting is done by cutting the stalks with the hilaire four or five centimeters under the ground. They are collected into little piles, sometimes protected by a shelter of plant material for drying, and then heaped into stacks to await the detachment S [462] of the shells several weeks later by threshing or by hand. This last operation is entrusted to the women and children. All of these tasks require great effort, and the more so since during the S [243] same brief period one must busy himself with the food crops, millet, niébés /Vigna/, etc.

S 241 The ways in which the groundnut is associated with the food crops are quite variable and put their mark on the agrarian 244 landscape.

W 244 1) The lougan of the Ouoloff peasant. The Ouoloff peasant of Cayor or of Siné-Saloum represents the most traditional type of cultivator of groundnuts. He still practices shifting cultivation on his lougan /cultivated field/ cleared by fire in the open bush. Although he does practice a millet-groundnut rotation, often with very little strictness, he does not know the virtues of fertilization. He cultivates the soil until it is exhausted and then abandons it for 15 or 20 years, which allows it to go back to bush. Today, however, demographic pressure does not always permit him to dispose of the vast areas of land required for this long rest. S W [433] The soil is rapidly being exhausted; the yields are diminishing. In Cayor the latter have fallen off at least 700 kilograms per hectare. The cultivation of the groundnut is very obviously regressing.

S SR 241 2) The organized ground of the Sérère /Serer/ peasantry (2). The Sérère are a group of Sudanese origin, driven back

S [113] 2. Pelissier, P. "Les paysans sérère, essai sur la formation d'un terroir au Sénégal /The Serer peasants, an essay on the formation of a ground in Senegal/." Les Cahiers d'Outre-Mer, Vol. VI. 1953. No. 22, pp. 105-127.

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/7 cont./ by the Mandingue and settled in Siné-Saloum. They are above all millet farmers; on the average they cultivate a hectare of this cereal to 70 acres of groundnuts. The groundnut, having entered the agricultural cycle quite recently, has contributed to the formation of a ground of specialized sectors. Around the village, surrounding it, are located the fields of small millet, cotton, and manioc. Beyond this pombod, under the Faidherbia, the ground is divided into three areas /soles/ corresponding to a system of triennial rotation, small millet, groundnuts, and fallowing, where, after cultivation, the animals graze and manure the soil for the next cultivation. Each family has its shares in each /8/ /Fig. 1 appears here/ area.

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The separation between these three large sectors of the ground is maintained by living hedges or barriers of cut thorns. In Sérère country a permanent ground is delineated, and land ownership stands out. The peasant takes care of managing the land and only wants a little money for the groundnuts, a secondary crop.

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3) "Speculative" or "extractive" cultivation. In contrast to the Sérère example, this is a type of cultivation where the cultivator, often occasional, is attracted solely by the immediate profit that groundnuts may bring. It is practiced by the group of Murids on the one hand, and, on the other, by the navétanes /seasonal workers/.

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/9/ Muridism (3) is a Moslem movement founded by Sheik

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3. Pelissier, P. "L'arachide au Sénégal, rationalisation et modernisation de la culture," Les Cahiers d'Outre-Mer, Vol. IV, 1951, No. 13, pp. 80-85.

Amadou Bamba, who died in 1927. The brotherhood has many adepts, especially in Siné-Saloum near the Ouoloff. For the Murids, Islam is a religion based on renouncement. Agricultural work becomes a holy thing if it is done for the benefit of the pious man who prays. The adepts of Muridism, or talibés, thus

[TEXT CONTINUES ON P.7--Analyst]

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Fig. 1. Domain of the groundnut in Senegal.

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1. Sahelo-Saharan zone;
2. Sahelo-Sudanese zone;
3. Sudano-Sahelian zone .
4. Sudano-Guinea zone.
5. Guinea zone.
6. Coastal zone with relics of the Guinea woodland.
7. Groundnuts.
8. Progression of the domain of the groundnut.
9. Railroad.
10. Boundaries of the states.
11. Boundaries of the circles.

/9 cont./

795 have a moral obligation to deliver the products of their labor to the marabouts. With a remarkable ardor for clearing, these
244 Murids have improved new lands and have thus made a "ground-
311 nut front" progressing toward the east, especially on both sides
795 of the Dakar-Niger railroad. This cultivation, however, presents grave dangers, because the Murids essentially concern themselves with groundnuts at the expense of millet; they use the cleared lands in the average proportion of 60% of the area for groundnuts and only 40% for millet. Crop rotation and fallowing are all too rarely respected, and the lands put under cultivation are all the more unstable since the groundnut front now abuts on the zone of the lateritic cuirasses of the east, ushering in the Sudan.

244 427 [464] [167] [113] The navétanes (4) are the seasonal workers who come

4. Fouquet, J., La traite des arachides dans le pays de Kaolack et ses conséquences économiques, sociales et juridiques /The trade of groundnuts in the region of Kaolack and its economic, social, and legal consequences/. Law thesis, Montpellier, 1951, 262 pp.

from the Sudan in particular and, up to 1958, from the north of Guinea. They cultivate the groundnut for the benefit of
[466] the employer, or diatigui, according to the clauses of a ver-
[465] bal contract. The employer furnishes the cleared ground, the seed, lodgings, and food. The navétane prepares the land, sows, weeds, and gathers the harvest. Actually, he devotes scarcely three to four half-days per week in work for the benefit of the diatigui. He utilizes the rest of his time for clearing and cultivating for himself. This labor is very costly for the employer, who is often obliged to borrow at prohibitive rates in order to feed the navétane. Moreover, this system presents grave dangers, because the temporary immigrant, clearing and cultivating land for which he feels no attachment,

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244 407 shows no regard for it. Finally, the navétane eats millet and does not produce any, which in certain regions aggravates the problem of the supply. Before 1939, in the period of the full development of groundnut cultivation, there were up to 70,000 navétanes in some years. The system of the authoritative organization of labor during the hostilities could by no means support these effectives; therefore, with the return to freedom in 1946, the number of navétanes had fallen to about 12,000. In order to attract them, they were given free travel going and returning. The suppression of these facilities in 1956 and [648] the closing of the Guinea frontier at the end /10/of 1958 have [167] considerably diminished the importance of these temporary migrations, which, in sum, were not very profitable for the [433] economy of Senegal.

Other seasonal movements of labor take place in the 244 framework of groundnut cultivation. The sourga come from 166 the city and take their place among their relatives under the 464 same conditions as the navétanes. The baraguini are laborers [427] who, in the regions of Tambacounda and Kédougou, offer their assistance to the cultivators during the harvest. They dig up the groundnut stalks, dry them, and detach and clean the seeds.

1

244 433 All of these types of groundnut cultivation are characterized by small yields: 830 kilograms per hectare on the average in Senegal. These yields, a consequence of the poorness of the traditional technical contrivances, can hardly be improved. In recent decades the increase in volume of the harvest has been linked with that of the area cultivated, which is not without grave dangers: abuses of cultivation on soils that are unstable, and a falling off of food production. After some attempts without results in the years 1920-1930, it is mechanized cultivation which, at the end of the Second World War, seems most capable of increasing production for the benefit of the mother country, which suffered from a grave shortage of fatty substances.

1 [See Category 116, PP. 3-8 for types of autochthonous cultivation--Analyst]

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244 654 2. Experiences with mechanized cultivation. The experiences with mechanized cultivation proceeded from the arrangements of the law of 30 April 1946 on the first plan for "social and economic development of the oversea territories."

a) The first experience was that of the "bloc de l'arachide /bloc of the groundnut/." In 1947 the "Bloc de l'arachide" was created at Boulel, 21 kilometers north of Kaffrine, in the region of new lands. It had at its disposal 15,000 hectares of bush in a single holding and was endowed with powerful equipment. A labor force of 360 Murids, directed by 160 technicians, proceeded with the clearing, which in 1954 reached about 3,000 hectares. The aims of the enterprise are multiple. It is a matter of: 1. testing the equipment to be used in the preparation of the soil plowing, [795] seeding, weeding, and harvesting; 2. initiating the Murid labor force in the handling of mechanical machines; 3. procuring contrivances for certain jobs, such as decortication for the sowing, deherbaging before the harvest; 4. instituting methods of cultivation that can give the highest yields while protecting the soil.

The practical results have been rather mediocre. The expenses are very high, and amortization of the equipment is scarcely possible. [795] Moreover, the Murid colonists have adapted themselves poorly. In 1953 the latter were eliminated, and in 1955 the Bloc became the "Secteur expérimental de modernisation agricole" (S.E.M.A.) /Experimental Section for Agricultural Modernization/. Its activities were henceforth to be divided /11/ into three sections: a management section which supervises the clearing; an experimental section determining the most suitable techniques of cultivation and instructing the labor force; a section of exploitation, which applies the results of experimentation. The S.E.M.A. "admitted" 155 families for its work. It furnishes the lands prepared by machine, assures certain methods, loans food and seed without interest. Those admitted must take care of the complementary

/11 cont./

244 654 tasks by hand; they promise to respect the rotations prescribed by the experimental section.

b) The experience of the C. G. O. T. in Casamance began in 1948. Within the framework of the first plan, the Compagnie générale des oléagineux tropicaux /General Company of Tropical Oily Substances/ acquired vast areas of land in the region of Séfa, upstream from Sedhiou. Powerful equipment permitted this society of mixed economy to clear 4,000 hectares of woodland. At great expense the company [177] recruited some European technicians and local labor receiving wages higher than the average. The experience of total mechanization met very grave difficulties: clearing woodland is very ticklish, because carapaces are found at a shallow depth, the equipment wears out very quickly, and the administrative [433] expenses are very high; and then, when yields of 2,000 kilograms of groundnuts per hectare are anticipated, only 1,200 are obtained. The company had to modify its policy. The lands were divided among the "colonists," who promised to respect a millet or rice-groundnut rotation. The company cultivated the rice mechanically and kept the harvest. It proceeded to the more difficult tasks in connection with the groundnuts and collected in exchange 450 kilograms of shells per hectare thus cultivated. The millet went to the colonists.

795 244 c) The Murid chiefs of the region of Djourbel also had an experience with mechanization. In fact some of them, enriched by the "gifts" from the faithful, acquired equipment and in the new lands undertook mechanized cultivation of the groundnut in imitation of the example of Boulel. This system, without considering the dangers of the deterioration of the soil, seems dangerous from the social point of view, because it may strengthen the hold of the marabouts on the faithful, who become ordinary laborers.

244 In fact the experiences with mechanized cultivation have been dismissed because of a check on how much one could anticipate a generalized use of machinery. Nevertheless, [654] in sum, these modest attempts have not been as catastrophic

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as the one of the famous "groundnut scheme" of Tanganyika. Moreover, they have greatly contributed to the rationalization of the traditional techniques, also studied since 1924 at the experimental center of Bambey.

3. Improvements in the traditional methods of cultivation. The center of Bambey, administered by the Institut de recherche des huiles /12/ et oléagineux (I.R.H.O.) /Institute for Research on Oils and Oily Substances/ has made great efforts, especially since the end of the last war, in the selection of seed, instituting new methods of cultivation, and protection of the soil and the natural environment. These studies, together with the information furnished by Boulel and Séfa, have given very encouraging results.

1) The selection of seed. In traditional cultivation, the cultivator had to take the seed for the next season from his own harvest. This system was not very satisfactory: the seeds were often of mediocre quality, and they did not keep well; finally, very often the cultivator improvidently sold part of his stock before the end of trading and consequently had to resort to usurious loans.

Since 1924 the center of Bambey has introduced seed selected for high yield, adapted to the natural conditions of each productive region. The adoption of creeping varieties for the dry regions of the north and of erect plants for the more moist and compact soils of the south assures an increase of 20% in yields. In 1935 26 metric tons of selected seed had been distributed; in 1951 this figure exceeded 35,000. Since then more than 90% of the seed used has been selected seed. The popularization and the distribution of these seeds are handled by the satellite centers, but above all by the sociétés de prévoyance /welfare societies/, which in 1958 became the Sociétés mutuelles de développement rural (S.M.D.R.). The distribution of the seed takes place between the closing of

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trade and the beginning of cultivation, at an interest of 20% on a base of about 100 kilograms per cultivator. Reimbursement takes place before the opening of trade, the greatness of the loss explaining the high rate of interest. The seeds stocked by these Mutuelles are disinfected, and samples are sent to Bambey for analysis.

2) Improvement in the techniques of cultivation. An agricultural calendar restricted to four months and demanding hard labor, very rudimentary implements, and the absence of fertilizers explain in large part the lack of efficiency of the traditional methods.

The example of Koutiala in the Sudan, where some plows were distributed, has shown that the use of this implement is often prohibited in a tropical environment. In contrast, Bambey and Boulel have successfully experimented with small equipment, hoes and drills /semoirs/, in mixed /attelée/cultivation. These light implements can greatly facilitate the work of the peasant. A great obstacle remains in the mediocrity of the animal husbandry, inasmuch as it is divorced from agriculture. The donkeys throughout the country, the camels in the north, and the cattle entrusted to the Peul have never been regarded as draft animals. Today 20,000 light drills, sold on credit by the S. M. D. R., are in service. Up to now the hoes have not had the same success.

/13/ Mixed cultivation also has the advantage of linking cultivation and animal husbandry and of permitting the agriculturalist to utilize the manure, as the Sérère know how to do. The experiences of Bambey have shown that manuring is to be done for millet, but not for groundnuts, under penalty of harvesting many empty shells. The use of millet as green manure seems very beneficial on these unstable lands; the application of the fertilizer compound N. P. K., in the form of tablets to avoid rapid leaching, assures returns 30% higher. At the present time the Mutuelles are distributing about 6,000 metric tons of fertilizer a year. The high price of these imported products is an obstacle to their popularization, but some

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242 244 654 specialists envisage the utilization of the phosphates of Thiès.

3) Protection of the environment. The cultivation of the groundnut with the traditional techniques carries with it grave dangers for the soil. The abusive burning of brush denudes it and facilitates the erosive action of the dry harmattan which blows at the end of the dry season, from the month of March. The cultivation, most often improvident, leads to the rapid deterioration of very unstable soils. In the west the sands are impoverished, the salts are rising to the surface; in the east the lateritic cuirass appears at a shallow depth.

313 656 Legislation is intervening in defense of the natural environment; the decree of 4 July 1935 has interdicted the cutting of trees without authorization and has regulated the burning of brush and clearing. The most effective remedies, however, have been introduced by experimentation and recommended after a serious inventory of the soils. The example of Boulel has shown that bands of natural vegetation separating the clearings by passages perpendicular to the roads are an effective remedy against the action of the wind. The instability of the soils requires a strict system of rotation. Bambey and Boulel have proved that the sequence of millet, groundnuts, and fallowing is the best for preserving them. Fallowing for two years, recommended in the south, is insufficient in the north, where six years of rest seems to be indispensable. It is undeniable that for several years these crop rotations have been followed more and more, especially in the pilot sectors. Finally, the rearrangement of the map of the groundnut, amply primed, may have beneficial consequences. The circles /cercles, administrative districts/ bordering the Senegal River have practically abandoned this crop (Podor, Matam, etc.); northern Cayor, with a dry climate, impoverished soils, and a large population, has had a very marked decline in groundnuts to the profit of millet. In contrast, the new regions in Siné-Saloum and Tambacounda typically become groundnut-producers.

All of these innovations can actually bear fruit only with the acceptance of the peasant masses, which poses the problem

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of training. This is one of the essential preoccupations of the present Sengalese government.

II. The "Trade" of Groundnuts

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For a century the total volume of production has progressed in spectacular fashion. Actually, no statistics are available at the harvesting stage. Only the commercial figures are known with any accuracy. In any case they differ little from the total figure of production because local consumption seems to be of little importance. It is estimated that the average production of groundnuts from 1900 to 1904 was 123,000 metric tons. The more recent figures are the following: 1938-1939 campaign, 584,000 metric tons; 1942-1943 compaign, 183,000 metric tons; 1943-1944 campaign, 281,000 metric tons; 1957-1958 campaign, 808,000 metric tons; 1958-1959 campaign, 653,000 metric tons; 1959-1960 campaign, 720,000 metric tons.

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Except for the period of the war, when the production of groundnuts, difficult to export, decreased to the profit of that of millet, progress was continuous, the 1957-1958 campaign being exceptionally favorable.

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This production enters into the circuit of commercialization or "trade," which today is very strictly regulated.

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1. The organization of "trade." The commercialization of the groundnut has replaced the "trade" in gum, slaves, and gold of the former colonial system. Although the term is still often used, its present context is very different from the acceptation of the era of the colonial pact. Trade is no longer, as Littré wished it to be, an exchange trade organized almost exclusively for the benefit of the European "trader"; today it is a commercial activity that is strictly regulated as to time and place and open only to approved intermediaries.

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1.) The "campaign." "The campaign" is the period

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442 during which commercial operations in groundnuts are authorized.
654 It is opened and closed each year by governmental decree. In
438 general it begins at the end of November or the beginning of December and closes at the end of April. The date of opening the campaign is set about two months after the beginning of the harvest, in order to avoid premature uprooting and to favor
438 the reimbursement of the seed advanced. This system never-
442 theless leads to some smuggling in the south, because the
[439] navétanes, anxious to return home, and the peasants, without any money, are tempted to sell in Gambia. At the time of the close, the transactions have been over for a long time, but this decision prevents the eventual sale /15/ of the seed distributed by the Mutuelles. In order to have the commodity brought in gradually and to avoid heavy transactions at the beginning of trade, operations are suspended from Friday to Monday. Nevertheless by the end of the month of January nearly all of the harvest has been negotiated.

366 2) The "points of trade." Since 1932 the operations of
442 selling must take place in the localities called points of trade
438 or "escales" located on the railroad or a road (Circular of 13 July 1932). These points of trade, which were 175 in number in 1935, now number more than 300. The limitation, in 1932, on the number of the points of trade was a response to the desire to moderate the rhythm of the selling and to avoid the proliferation of intermediaries. The recent creation of new escales is
● [244] devoted to the conquest of new lands and is an attempt to avoid the abuses of cultivation on the lands near the former points of trade.

The accession of a locality to the rank of escale makes
[369] it legally an urban center, with the obligation of division into lots /lotissement/ and, for the merchants, permanent buildings. The campaign is a period of great animation for the escale.
442 The merchants or traders open their bank of purchase or "factory."
437 Traditionally, intermediaries, or "masters of language," conduct
[492] the producer to the factory. The groundnuts, transported by don-
[488] keys and in bags loaned by the trader, are weighed and emptied

19: Pehaut--19 K-4 (no date) 1961 MS37 Senegal MS37

/Between pp. 16-17/ Plate I

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A. Harvested field of groundnuts in Wolof country.

B. The groundnut harvest in Sérère country.

22:Winterbotham et al. K-4 (no date) 1944 MS37 Senegal MS 37

Gambia, often in rotation with ground-nuts. Of the quick-maturing varieties *souna* and *sanio* are the most popular, the former thriving in sandy soil, the latter in heavier ground. Several kinds of sorghum are also [illegible] the river area millet is sown where the floods have [illegible] and is harvested in April. In other parts it is planted immediately before the rainy season. Production probably averages about 300,000 tons annually. The export of millet from one province to another is controlled according to local needs.

Rice. The area flooded by the Casamance is naturally suited for rice cultivation. The rice-fields are handed down from father to son, each family growing sufficient for its own consumption and to pay its taxes. A store of rice is always kept to guard against a lean year or to be exchanged for some other commodity required.

Sugar-cane. This is grown near every village where there is enough water. No attempt has been made to commercialize the crop, and the West African varieties are more woody and contain less juice than those grown elsewhere for export. Sugar-cane (*Saccharum officinarum*) is a perennial plant of the grass family. It is easy to grow, even near the sea, but takes at least a year to mature. When grown for local use, as it is here, sugar is not extracted, but the red or white stems are chewed.

The Baobab. The baobab (*Adansonia digitata*) is found generally in the thornland (Plate III), and is, therefore, much in evidence in Senegal. It is remarkable for the large girth of its trunk in comparison to its branches and leaves. The long green fruit, known as monkey-bread, is used as a food or as a seasoner. Boiled with water and then cooled, it also makes a refreshing drink, while the leaves and the young shoots are also good to eat. The inner bark yields a tough fibre, which can be twisted into rope or woven into a waterproof cloth. About 30 years ago a factory was opened at Dakar to prepare the fibre for export to rope- and paper-making firms in France. The bark and fibre can be stripped off without causing the death of the tree.

Manioc, beans, and maize are grown generally in the vicinity of villages. In the Cape Verde peninsula these, as well as yams, sweet potatoes, and melons, are grown for the Dakar markets.

Economic Crops

Ground-nuts. Ground-nuts (*Arachis hypogaea*) require a tropical climate and an annual rainfall of from 14 to 60 inches. They are the

22:Winterbotham et al. K-4 (no date) 1944 MS37 Senegal MS 37

244 [433] sixth crop of Africa, and 43 per cent. of the total continental production comes from Senegal. The two main groups cultivated are the 'runner' and the 'erect'. The Rufisque and Cayor varieties, both runners, are those grown generally here and also in British West Africa. The method of cultivation is described in Volume I, p. 321.

[439] Ground-nuts were originally grown as a staple native crop, but the industrial demand for vegetable oils, coupled with the development of transport facilities, opened up a world market for them. Extra

[167] [464] labour for the harvest is provided annually by seasonal immigration from French Sudan, French Guinea, Portuguese Guinea, and the Gambia. In 1938 the number of outside workers was 69,757. Of these, 56,743 went to the Kaolack area, between 1,000 and 3,500 to Sedhiou, Ziguinchor, Kolda, Tambacounda, and Diourbel, and the remainder to Thiès and Linguéré.

[258] There are numerous shelling factories. Early in 1939 new ones were opened at Kaolack, Ziguinchor, and Koungheul.

In 1938 nearly 2,000,000 acres were under cultivation and the [654] experimental station at Bambey distributed 5,414 tons of selected seed. In 1939 7,382 tons of seed were sent out, with a corresponding increase in acreage.

[648] [388] During the British blockade of French West Africa after the fall of France in 1940, ground-nuts were converted into fuel oil. If this practice has been proved worth continuing after the war, cultivation may be greatly extended.

248 *Sisal.* Sisal originated in Mexico, being named after the port of Sisal in Yucatan province, and it was introduced into Senegal at the end of the nineteenth century. The species grown are *Agave rigida sisalana*, *A. rigida elongata*, and *A. rigida zapupe*. The rigid leaves containing the fibre are about 4 feet long and are harvested biennially from the fourth to the eighth or tenth year. When a plant has finished producing it shoots up a tall flower stem, with bulbils or buds on the end, and then withers.

283 288 The preparation of stem and leaf fibres is lengthy. First the fleshy tissue encasing the fibre is scraped away, and then the fibre is washed, hung out to dry, and brushed. It is now ready for grading. Next it is combed into a continuous sliver of untwisted rope. The final process is the drawing and twisting of the sliver to a uniform thinness for spinning into a rope that is particularly resistant to sea-water. The 248 largest plantation is in French Sudan, and stretches for 12 miles along the bank of the Senegal near Kayes. Other smaller ones are in Tambacounda and on the Cape Verde peninsula. There is oppor-

22:Winterbotham et al. K-4 (no date) 1944 M537 Senegal MS 37

tunity for much development in this industry, particularly in the irrigated areas of the Casamance Territory and Sine-Saloum. Europeans own the majority of the plantations, but co-operate with and encourage native growers. During the first quarter of 1939 production in Tambacounda province was 152 tons, and the factory at Kolda treated 165 tons of fibre.

Ginger. The ginger plant (*Zingiber officinale*) is grown on a small scale wherever the rainfall is over 30 inches. It does best in a rich soil and requires shade. The ginger of commerce is prepared from the rhizome or underground stem, which is mature when the leaves turn yellow. The best ginger is prepared from immature rhizomes, which are peeled and preserved in sugar syrup, but in West Africa the coarser, mature stems are also used. Chewed ginger is reputed to enhance the stimulating effect of kola.

Pimentos. Several species of *Capsicum* or peppers grow in the Federation. In Senegal the most common are *C. annum* and *C. frutescens*, both bearing red fruits. The former was introduced from South America. It is less pungent and has larger fruits, known as 'capsicums'. *C. frutescens* has hotter fruits, known in commerce as 'chillies'. Cayenne or paprika is the red powder obtained from grounding the fruit. Pepper shrubs are grown from seeds, and after three months bear fruit for at least six months. These red peppers should not be confused with the common pepper, which is a climber and does not grow in West Africa.

Henna. This plant (*Lawsonia inermis*), like sugar-cane, maize, ginger, and castor oil, is grown wherever there is enough water. The plant is much revered by Moslems and often grown as a hedge. The powder of the young, dried leaves is the source of henna dye.

Other Crops. Other products of which small quantities are exported are citrus fruits, gum arabic, shea butter, cotton, kapok, and palm kernels.

Livestock

Livestock are fewer here than in any other colony. Sheep and goats, the latter being the more numerous, are kept near the river between Podor and Bakel and number about 100,000. There are some 310,000 cattle, 50,000 donkeys, 6,000 camels, and 14,000 pigs. These last are mainly kept in the Casamance Territory. There are 36,000 horses. These are of two breeds, the M'Bayar and the M'Par, and

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465 357 Domestic work is rare and costly. A cook is paid between 200 and 500 francs a month, a houseboy from 100 to 200 francs. These rates are similar to the ones prevailing in Dakar.

463 465 The native, moreover, is attracted to the cities only by the high wages. Competition does not come into play, as in Europe. There are only rare specialists or artisans. As for the laborer, most often he prefers to work his field in the countryside or to hire himself out as an agricultural worker for a native employer who will feed him and leave to him a part of the harvest. [241]

In an agricultural region such as Sine-Saloum, the native is primarily a cultivator.

● 244 166 167 Navétanes. Each year at the time of groundnut cultivation, Sine-Saloum gets many native cultivators coming from the east and south (Sudan, Portuguese Guinea, Casamance, Upper Gambia, and even Guineans from Fouta-Djallon).

These immigrants are called "navétanes," from the word "navet," which means "rainy season," because these foreigners arrive shortly before the first storms and leave as soon as they have sold their harvest.

About 10,000 to 15,000 of them come each year. A 244 466 local custom called "Lâdyino" governs the relations between the foreigner and his employer.

This is a verbal agreement according to which the employer assures his co-covenanter food and lodgings for the period of the work and in addition loans him a particular field. [465]

/106/ The navétane works for his employer every morning, except Monday and Thursday. The rest of the time is left to him for his personal crops. The navétane gets seeds from his landlord.

His work consists of the preparation of the field (lougan), sowing, and weeding.

After the harvest has been gathered, the landlord stops feeding him.

At the time of his departure, the navétane must reimburse his employer for the cost of his food, which is fixed by [465]

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244 466 [465] contract, depending on the region, between 100 and 120 francs.

The European agricultural concessions should draw inspiration from this custom. In order to retain a labor force, it would be proper to assure the native food and lodgings and leave a small field at his disposal, while at the same time allowing him a day or two a week to work for himself.

This formula is applied in Latmingué by the Société des plantations, which exerts all its efforts on the cultivation of manioc.

433 Economic facilities. The economic facilities of the circle include ports, railroads, highways, inland waterways, and a telegraph, telephone, and postal network.

504 Ports. These are river ports where the tide permits ocean-going steamers, not exceeding a certain tonnage, however, to conduct their operations along the wharves or landings built along the steep banks.

The Saloum has two ports of this type: Kaolack and Foundiougne.

The Sine has one port, Niamnioro.

The Miniminian, an affluent of the Gambia, has one port, Saboya.

On the Saloum, between Foundiougne and Kaolack, two more embarkation points are visited: Kamatane, included in the concession of MM. Civrac frères (left bank), and Lyndiane, included in the concession of the Société des Anciens Etablissements Charles Peyrissac et Cie. (right bank).

On all of the other channels or marigots /107/ embarkation and debarkation points -- with wharves -- accessible only to cutters with a tonnage between 25 to 50 tons have been installed. These cutters make the transit and carry their cargo to the big ports of Kaolack, Foundiougne, and Niamnioroh.

Over the past several years, Kaolack has become an important embarkation and debarkation point. It is also the [496] natural port of the French Sudan because it has the advantage of being linked to this colony by a branch which connects it

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Total Traffic for the Circle
(Kaolack, Foundiougne, Saboya)

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Periods	Tonnage Unloaded	Tonnage Loaded	Tonnage Unloaded and Loaded
1909-1913	12,076 t.	49,189 t.	61, 265 t.
1914-1918	12,333	70,767	83,100
1919-1923	17,438	99,803	17,241
1924	42,288	139,712	182,000
1925	64,668	182,277	246,945
1926	71,964	209,446	281,410
1927	71,237	200,393	271,630

433 505 The tonnage decreased by about 10,000 tons in 1927, but this was solely due to the fact that the groundnut harvest was slightly deficient as a consequence of an overabundance of rain. On the whole, one can say that there has been constant and uninterrupted progress since the pre-war period. The announcement of this figure indicates the flourishing situation of the region of Sine-Saloum.

433 439 In 1927 the total value of imports and exports for the circle amounted to 454 million francs, 330 million of which were for Kaolack. With what left by way of the small customs stations along the border with Gambia, one can acknowledge that the value of general commerce in 1927 was almost 500 million, or almost a third of the total commerce of the colony of Senegal, which in 1927 amounted to 1 billion 562 million.

These figures speak for themselves.

Agricultural Resources of the Region: Crops

244 433 [439] The principal crop of Sine-Saloum is the groundnut. This plant is cultivated everywhere, but the best lands are in Sine and north of the railroad. The lands of Bas-Saloum

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244 433 are much less suitable for this crop because of their composition which gives a certain acidity to the nuts, thus rendering them less suitable for industrial use in /118/ the production of fine oils. [134 242] There have been attempts to correct this defect and to improve the quality of Bas-Saloum by means of seed selection and by the continued addition of seed from Sine; this has not yet been successful.

Fallow lands, however, are not lacking in the other regions of the circle.

There are 230,000 hectares planted in groundnuts. This figure represents 0.85 hectares per inhabitant. This is about 1/11 of the total area of the circle.

In 1914 this crop extended over 70,000 hectares. It has thus tripled.

The production, which was 75,000 tons in 1918, is about 140,000 tons today. It has doubled in 10 years. It amounts to almost a third of the harvest of Senegal.

One can determine the production of groundnuts in the circle since 1921 by the following figures (in tons):

Years	1921	1922	1923	1924
Tons	80,000	90,000	110,000	125,000
Years	1925	1926	1927	
Tons	135,000	145,000	140,000	

[167 242] These results are due in part to the increase in the population by the influx of foreign workers into the circle, who came to settle there or who hire themselves out, and in part to the selection of seeds and their distribution in ever increasing quantities.

[654 441 474] The credit for this work is to be given to the administration, the Société de Prevoyance /Welfare Society/, and the Chambre de Commerce of Kaolack, whose combined efforts have made it possible to achieve such a fine result.

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244 433 242 There is no doubt, however, that the yield per hectare is diminishing and that on much of the land today it is no more than 500-600 kilograms per hectare, instead of the 700-800 kilograms, and even 900, as has been seen sometimes in Sine. The land is becoming exhausted as a result of the lack of fertilizer and the absence of crop rotation. Two other factors likewise come into play: the too primitive native methods of cultivation and the inadequate selection of seeds. The native cultivator continues to work his land with the [412] hilaire, a kind /Pl. II appears here/ /119/ of spade with which he contents himself with scratching the soil. He thus reduces his work too much; he does his dressings badly or inadequately.

It has been demonstrated by the experiments made by the Compagnie française de l'Afrique Occidentale at Latmingué that with mechanical farm implements one could easily double the yield per hectare. On newly cleared land and with these methods, the yield has never been less than 1,000 kilograms and at times has reached 1,500 kilograms per hectare. It is necessary to persuade the native that he will profit by working the land with a little better equipment. The agricultural [654] services are working at this, and it is to be hoped that the more modern cultivation methods will double the yield. This is a critical problem.

243 433 Millet. Millet is likewise a crop on the road to progress. The types cultivated are: small and great millet, or, according to their native names, souna, sanio, bassi, fehla.

In 1927, the cultivated area was 240,000 hectares, with a total production of 119,000 tons, a little more than the needs of the population. In 1925, for a production of 80,000 tons, the population had sowed 210,000 hectares. The surplus production is consumed in the regions bordering Sine-Saloum.

Rice. Different varieties of rice are cultivated, especially in Sine and Bas-Saloum, where the annual rainfall is greater and where the soil is suitable for this crop. One can estimate that 15,000 hectares are planted to rice with a total

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433 [243] production of about 14,000 tons, which are entirely consumed on the spot.

[244] [474] Manioc. Manioc is the crop grown in some plantings around the villages. The native Société de Prevoyance distributed many cuttings in most of the cantons in 1925.

About 5,000 hectares are planted to manioc, with a production of 25,000 tons of fresh manioc.

[243] /120/ Maize. Maize is not planted everywhere. It is cultivated in Bas-Saloum and in Sine, a little in Saloum. There are 2,000 hectares of maize and 2,000 tons of production.

[244] Beans (niébés). The bean called "niébé" is planted on about 15,000 hectares, yielding a harvest of 7,000 tons.

Production, however, remains stationary, because the plant is attacked by various insects (weevils).

[245] [654] Bananas. Two banana plantations, established by the administration, exist at Sangako and Bani in Bas-Saloum. They could be multiplied in this region.

[249] Sugar cane. This product is not cultivated very much -- the soil is not suitable -- with rare exceptions.

[248] Cotton. Native cotton is cultivated only in small stretches. This crop takes up 700 hectares of land.

[249] Indigo. The region that is the principal producer of indigo is Bas-Saloum. This crop has tended to increase for the past several years.

[314] Kapok. The kapok tree lives in the wild state. There are some in the cantons along the railroad (N'Gahaye-Gossas), but especially to the south, starting at Kaffrine and above all in Koungheul. The native does not harvest it or harvests it poorly. The circle could yield 100 tons of kapok, but it provides only 20 tons at the most, used locally or sold abroad.

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433 Truck gardening. Truck gardens exist in the major
244 centers. This is still, however, a European crop, the native
242 consuming very little of our vegetables.

An experimental garden, or rather a nursery, was set up in Kaolack about 20 years ago. This nursery provided many tree plants for the Europeans and natives (eucalyptus, mimosa, flamboyants, Gambia, mahogany, silk-cotton trees, orange trees, lemon trees, and guava trees).

[648] /121/ European crops. Concessions. No agricultural colonization has been undertaken by Europeans, except at Latmingué.

In 1920, the Compagnie Française de l'Afrique Occidentale requested a concession of 200 hectares at Latmingué, 20 kilometers southeast of Kaolack, very near the Saloum, in order to conduct experiments on the mechanical cultivation of groundnuts. Improvements were made for four years. Improved agricultural equipment was used (tractors, gang plows, mechanical seeders, pulverizers, harrow-plows, and pickers). The tests made it possible to get an idea of the advantages of mechanical cultivation of the groundnut. The shortage of manpower, however, was an obstacle to extending the cultivation. The Compagnie Française abandoned this concession, which was recovered and expanded by the Société des Plantations of Latmingué, which now exploits it. The latter cultivates manioc exclusively. It has already cleared 200 hectares and planted 270 hectares in manioc. It is trying to cultivate this plant annually in nine months instead of 18. This development should be watched with interest. The needs of the mother country for manioc are considerable, and Senegal would find there another source of economic prosperity.

233 Animal husbandry. Pasturage is abundant, especially during the rainy season. It is sufficient to raise large herds of cattle, sheep, horses, and donkeys. Epidemics, however, decimate the cattle, which vary between 250,000 and 300,000 heads. During the dry season, the problem of animal fodder is doubled by the difficulty of finding water for the

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874 461 young people are inclined to seek our courses which prepare them for officialdom. The elite wishes to be instructed doctorally. It disdains manual trades. It is this state of mind that must be changed. Craftmanship is dying out. The governor of Senegal, under the over-all supervision of the governor-general, has understood this. The vocational courses in the capital of the colony, Saint-Louis, have been revised and improved. Agricultural schools have been established. More must be done. It is necessary to add a vocational workshop to each regional school and even to some of the primary schools. The child should become familiar -- before leaving school -- with the handling of the hammer, the chisel, and the plane; he should know how to use a shovel, spade, and rake. All of these skills should be lifted up out of disrepute, which has no reason for existing. Manual work must be put on an equal footing with intellectual work. We need good workers even more than good writers.

/127/ It is the duty of the administration to prepare the younger generation for the task that awaits them.

654 474 ● 244 Agricultural mutuality. The Société de Prevoyance. Within this order of ideas, and in order to develop a spirit of mutuality and a sense of foresight among the natives, the administration has created, like Algeria, native welfare and mutual loan societies. A society of this type has been operating in Sine-Saloum for many years. Its founding goes back to 1907. Its beginnings were modest. At first it brought together 718 cultivators. By 1910, the number of members of the society reached the figure of 1,567. This was still very few. The idea had borne fruit, however. The administration soon brought in the majority and then the totality of the cultivators.

[652] In July 1907, at its founding, the governor of Senegal put at the disposal of the administrator of the circle the sum of 20,000 francs in order to promote this effort for mutuality.

Thanks to this advance, 99,700 kilograms of groundnut seed was loaned to the 718 first adherents, who returned them in kind after the harvest with an interest of 30%.

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654 474 ●244 [251] From 1907 to 1910, storehouses were built to shelter the seeds. In 1910, these storehouses were multiplied in order to be more within the reach of the borrowers. On December 6, 1910, a decree of the governor of Senegal approved the definitive statutes of this society. The latter, on the basis of the experience of several years, have just been supplemented and revised.

The society of Sine-Saloum has 19 sections distributed throughout the circle.

As early as 1911 it had 160,000 members, and its cash on hand amounted to 139,499 francs. Its storehouse stock was 317 tons of selected seed.

Today, the society has property valued at more than 1 million. It has an annual income and expenditure budget of 5 million, including the value of the seeds which it keeps /128/ in its storehouses for the loans that it grants to its members for reimbursement in kind.

Since it demands an interest of 20%, it very rapidly increases its stock of seed. Thus, in 1928 it was holding more than 5,000 tons of seed. By 1929, it will have 7,000 tons. This is the precious guarantee for a fruitful harvest.

[242] Because all of this seed is carefully selected by the native chiefs under the control of the administrator, with methodical rigor. Although some chiefs are less strict in the selection, the majority understand their role. In the cantons of Diokoul Gandiaye, Kahone, Birkelane, and in those of Sine, Sokone, Sanghako, Koungheul, and Kaffrine, the seeds are sorted one by one, and only the shells with two nuts are accepted.

The cultivator quickly yields to these requirements, because he has recognized the necessity for them.

These loans are made in the month of June, before sowing time. They are repayable in kind in the month of December, after the harvest, with an interest of 20%, the said interest likewise payable in kind.

No defaults have been reported. The loans are for two hectoliters per cultivator.

/128 cont./

654 474 In order to enjoy these advantages the society member pays an assessment of one franc per year.

● 244 [731] He can also request and obtain loans of food, rice, or millet, if he is justified by a case of great necessity: scarcity as a result of an unfortunate or calamitous event.

[426] Finally, since last year, he has been able to obtain loans in money on the condition of certain guarantees. These loans are granted for cultivation, and also for the improvement of his agricultural equipment, or for starting or enlarging his herd. These loans may amount to as much as 5,000 francs and are to be paid back within several years.

654 474 In 1927, the members numbered 240,000.

[251] [343] [312] The society has 30 storehouses, more than half of which are built out of permanent materials: laterite stones or cement.

/129/ It has utilized its resources to make wells out of reinforced concrete in order to procure for the inhabitants the potable water necessary for their needs and for the needs of their animals.

It gives bonuses to the cultivators who exhibit the best harvests. It also awards bonuses for the capture of animals harmful to agriculture.

The work accomplished is remarkable.

[244] The increase in the production of groundnuts in the circle is due to the Société de Prévoyance, under the control of the administration.

In it, commerce has a valuable organization whose usefulness it recognizes and whose incontestable and uncontested services it moreover appreciates.

312 The water problem. Wells. The serious question of water presents itself in the circle as it does everywhere in Senegal. The economic life of the region depends on the water supply of its inhabitants.

In order to prevent the danger of a water shortage, it has been necessary to dig wells. The séanes, natural reservoirs or pockets dug by man, were too small in number. They received rain water, but their volume was limited, and a few weeks sufficed to empty them after the last rainfall.